

List of Current Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Claims 1 - 17 (Cancelled).

18. (New) A method for transmitting measured values between two measurement transmitters, which transmit, via two communication connections, digital signals according to the master/slave principle and analog signals to a control system, which serves as master, comprising the steps of:

transmitting digital signals between the two measurement transmitters via an additional communication connection; and examining, using the receiver measurement transmitter, incoming digital signals for at least one characteristic value of the transmitting measurement transmitter, in order to find measured values needed for evaluation in the receiver measurement transmitter.

19. (New) The method as claimed in claim 18, wherein:

communication between the measurement transmitters and the control system occurs according to the HART®-standard.

20. (New) The method as claimed in claim 18, wherein:

the receiver measurement transmitter evaluates the units characterizing number associated with a given numerical value; and

the meaning of the units characterizing number is established in the HART®-standard.

21. (New) The method as claimed in claim 18, wherein:

the transmitting measurement transmitter is placed in the HART® burst mode, for transmitting its measured values in regular intervals.

22. (New) The method as claimed in claim 18, wherein:
the receiver measurement transmitter is operated in master mode and reads the measured values out of the transmitting measurement transmitter.

23. (New) The method as claimed in claim 18, wherein:
the receiver measurement transmitter and the transmitting measurement transmitter register different measured variables.

24. (New) The method as claimed in claim 23, wherein:
the receiver measurement transmitter, a computer unit is installed with an evaluation program, which determines from the different measured variables a derived measurement variable.

25. (New) The method as claimed in claim 23, wherein:
the receiver measurement transmitter is a vortex measuring device and the transmitting measurement transmitter is a pressure measuring device, which determine, respectively, flow velocity and pressure in a medium.

26. (New) The method as claimed in claim 25, wherein:
installed in the vortex measuring device is a flow computing unit, which determines, from the pressure value and flow velocity of the medium, a derived, measured variable.

27. (New) The method as claimed in claim 25, wherein:
the vortex measuring device contains an additional, installed, temperature sensor.

28. (New) The method as claimed in claim 27, wherein:
installed in the vortex measuring device is a flow computing unit, which determines from the flow velocity of the medium, the temperature value and the pressure, a derived, measured variable (e.g. heat flux value or mass flow value).

29. (New) The method as claimed in claim 23, wherein:

the receiver measurement transmitter is a vortex measuring device with an installed, additional, temperature sensor, and the transmitting measurement transmitter is a temperature measuring device.

30. (New) The method as claimed in claim 29, wherein:

in the measuring device, a flow computing unit is installed, which determines from the flow velocity of the medium, the temperature value of the temperature sensor of the vortex measuring device and the temperature value of the temperature measuring device, a derived, measured variable (e.g. energy drain).

31. (New) The method as claimed in claim 23, wherein:

the receiver measurement transmitter is a vortex measuring device and the transmitting measurement transmitter is a temperature measuring device, which determine, respectively, flow velocity and temperature in a medium.

32. (New) The method as claimed in claim 31, wherein:

in the vortex measuring device, a flow computing unit is installed, which determines from the flow velocity of the medium and the temperature, a derived, measured variable (e.g. heat flux value or mass flow value, for liquids or saturated steam).

33. (New) The method as claimed in claim 18, wherein:

the receiver measurement transmitter accepts and evaluates signals from more than one transmitting measurement transmitter.

34. (New) The method as claimed in claim 25, wherein:

the receiver measurement transmitter is a Coriolis flow measuring device, an ultrasonic flow measuring device or a magneto-inductively or thermally working, flow measuring device.